

DRAFT
CALFED BAY DELTA PROGRAM
WATER QUALITY
PARAMETER ASSESSMENT TEAM POLICY

FEBRUARY 25, 1998

This paper recommends policies to be followed concerning membership, function, and structure of the Water Quality Parameter Assessment Team; the process for adding or deleting parameters of concern; the process for developing target levels; and, the role of the Parameter Assessment Team in the implementation phase of the CALFED Water Quality Program.

Membership

The Parameter Assessment Team (PAT) is a voluntary, technical working sub-group of the Water Quality Technical Group representing a variety of water quality interests. The current membership of the PAT consists of representatives from State, federal and local government, industry, agriculture, municipal water districts, environmental and recreational interests. Membership changes may occur based upon recommendations by the PAT, recommendations of the Water Quality Technical Group, or decisions by program management. The current membership roster is attached.

Functions

The PAT operates in a scientific advisory capacity to the Water Quality Technical Group which, in turn, provides advice to water quality management of the CALFED program. The following are the functions of the PAT:

1. Proposes or receives recommendations to add or delete water quality parameters of concern to the CALFED program.
2. Gathers or receives scientific evidence regarding environmental and human health impacts of proposed parameters of concern. Maintains awareness of recent scientific literature pertaining to CALFED water quality interests.
3. Provides scientific evaluations to determine whether additions or deletions should be made to the list of water quality parameters of concern to CALFED, and submits recommendations to the Water Quality Technical Group.
4. Makes recommendations to the Water Quality Technical Group on water quality goals, objectives, or target levels for new parameters of concern, the attainment of which will satisfactorily reduce or eliminate negative impacts on beneficial uses of the waters of the Bay-Delta estuary, and upon species inhabiting the estuary.
5. Recommends priorities for implementing corrective actions based on scientific evaluation of the degree to which beneficial uses are affected by parameters of concern. The relative practicality and cost effectiveness of implementing

- corrective actions will be considered.
6. Evaluates attainment of water quality targets for implementation of CALFED water quality actions.

Information and findings developed by CALFED through the efforts of the PAT may be provided to regulatory agencies, and the CALFED program is intended to be fully coordinated with the regulatory activities of CALFED agencies; however, the PAT will not function as an advocacy group in regulatory processes.

Relationship to Other Water Quality Program Activities

The relationship of the PAT to the Water Quality Technical Group and to the CALFED Bay-Delta Program is depicted on the attached figure. Two activities are being planned that will need to be coordinated with the PAT:

- The Water Quality Science Review Panel that is being considered as a result of the successful panel review of the Ecosystem Restoration component of the program; and,
- The Implementation Technical Group that is being considered to provide assistance in developing an implementation strategy and detailed implementation plan for CALFED water quality activities.

The relationship of the PAT to these functions is yet to be determined, and will be discussed at the Water Quality Technical Group meeting February 25, 1998. Following this discussion we plan to define these relationships and to commit to maintaining them.

Process for Adding or Deleting a Parameter of Concern

The process for adding or removing parameters of concern is being standardized through the assistance of the PAT, in order to maintain program consistency, and is envisioned to include the following steps:

1. A formal written request is made to the CALFED Bay-Delta Program.
2. The formal request is determined to comply with CALFED guidelines for adding or deleting a parameter of concern.
3. The party requesting the addition or deletion of a parameter of concern attends a PAT meeting to present the request, and to provide scientific support for the proposal.
4. The PAT will evaluate proposals and will formulate recommendations to the Water Quality Technical Group for addition or removal of CALFED water quality parameters of concern.
5. The Water Quality Technical Group will consider the proposal and formulate recommendations for consideration by CALFED management.

6. CALFED management considers the Water Quality Technical Group recommendations and makes a determination.
7. Persons proposing addition or removal of water quality parameters of concern can appeal directly to CALFED water quality management in cases where the PAT or WQTG rejects a proposal to add or remove parameters of concern from the CALFED list; however, such appeals may not be made before the PAT and WQTG have had full opportunity to deliberate the proposal and make recommendations. In such cases, the appellant will accept the burden of demonstrating that the PAT and/or WQTG acted inappropriately in considering the proposal on its technical scientific merits.
8. Decisions of CALFED management will be final.

A request form has been developed for this purpose by the PAT and is being recommended for CALFED approval (Sample attached). In addition, guidelines for adding or deleting parameters of concern have been developed by the PAT and are being recommended for CALFED approval. (A sample copy of this form is also attached). These guidelines do not exclude parameters which are not being considered by a regulatory agency. For example, the PAT may consider research information and/or monitoring data which, if compelling, may justify listing a parameter not being considered by a regulatory agency.

The PAT has developed a category for parameters where scientific information is still being developed but where there is enough information to indicate a potential concern. Being placed in this category termed "potential parameters of concern" means that there is not enough scientific information to justify a recommendation that a parameter be formally added to the parameter of concern list, yet there is enough information to warrant that the parameter be tracked periodically for future development of needed information. A parameter on the potential parameter of concern list is not a candidate for a water quality implementation action.

A parameter may be delisted from the parameter of concern list if adequate information becomes available which demonstrates that the parameter is not causing adverse effects to beneficial uses. The justification for parameter removal from the CALFED list would be particularly compelling if the appropriately regulatory agencies amend their regulatory standard for the parameter. If, for example, cleanup efforts were sufficiently successful to justify removal of a parameter from the Clean Water Act 303(d) list, this de-listing would be a presumptive cause of CALFED de-listing.

Significance of Parameter of Concern List

The fact that a parameter of concern is placed on the list means there is enough scientific information to warrant an evaluation leading to possible investments in water quality actions. Although the process for listing a parameter helps to ensure that substantial information exists to warrant an evaluation, the listing alone does not mean that it will necessarily lead to prevention and control actions. The evaluation process may include: monitoring and research leading to more complete understanding of environmental effects and possible prevention and control mechanisms; identification and pre-feasibility evaluation of possible prevention and control

actions, followed by pilot scale testing of methods; cost analyses; and, prioritization of actions according to benefits and costs relative to the other CALFED Bay-Delta Program actions. After this evaluation, water quality actions involving parameters of concern are further refined and projects are designed for implementation, followed by preparation of project-specific environmental documentation, project implementation, and adaptive management. Therefore, while a listing among the water quality parameters of concern is not a guarantee of a specific outcome or control action, it is a CALFED commitment to the evaluations necessary to determining the feasibility and priorities through which CALFED water quality investments are to be made.

CALFED Water Quality Targets

Water quality target levels for CALFED water quality parameters of concern are developed to address concentrations of contaminants in water, sediments, and tissues of aquatic organisms that affect the aquatic food web of the Bay-Delta estuary, or may affect humans from consumption of aquatic organisms. Where appropriate state or federal regulations exist, CALFED target levels are based on regulatory limits. CALFED water quality targets are not regulatory in nature and are not enforceable under the CALFED Bay-Delta Program. Instead, CALFED targets are designed to provide a yardstick to measure the success of implementing water quality actions.

PARAMETER ASSESSMENT TEAM

Membership Directory

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PARAMETER ASSESSMENT TEAM

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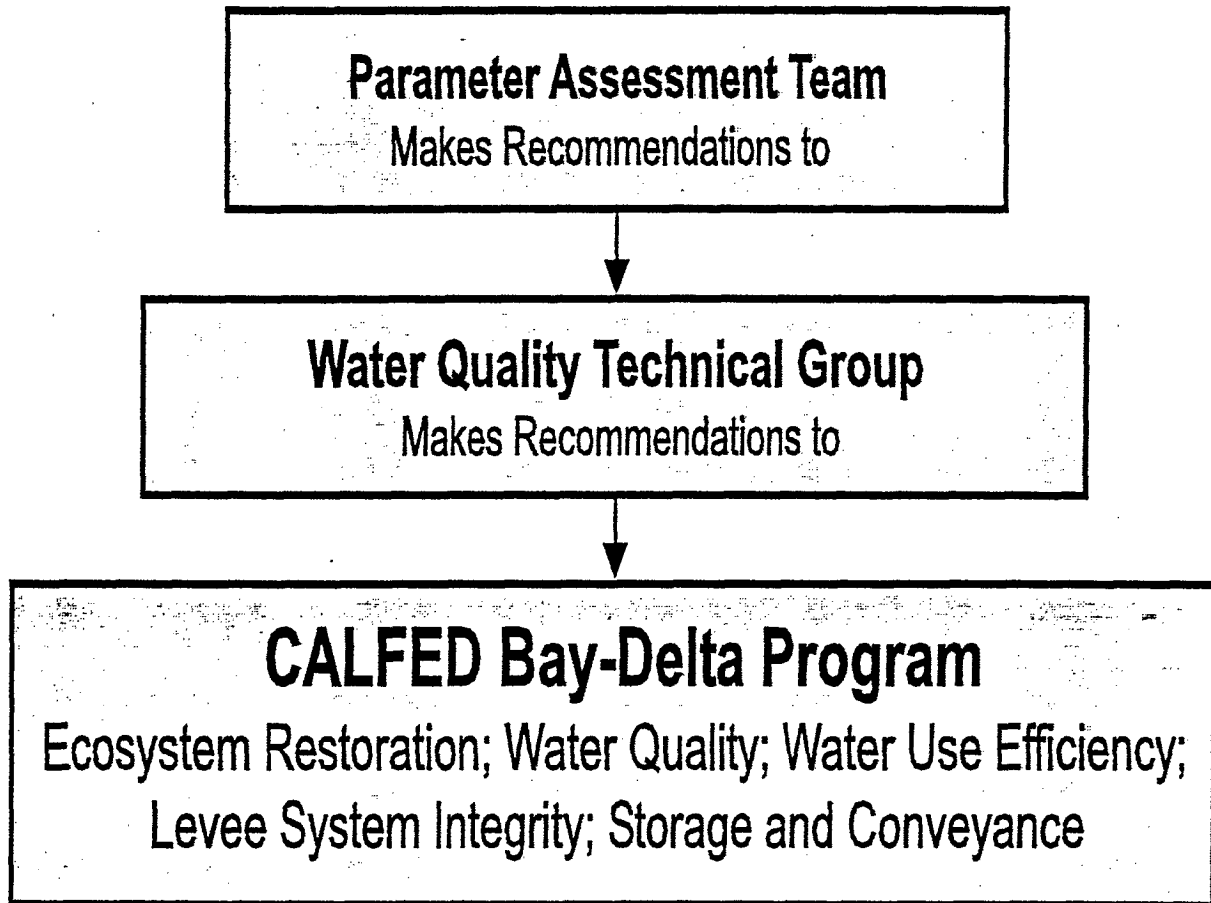
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Relationship Between CALFED and its Advisory Bodies



Request Form for Adding a Parameter of Concern

Please complete form as thoroughly as possible and provide all applicable references and information.

Parameter of Concern:

Presenter:

Agency/Organization:

Address:

Phone/Fax/E-mail:

State the request to add a parameter of concern:

GEOGRAPHIC SCOPE

Where within CALFED's geographic scope is the parameter of concern causing a water quality problem? *(Please see attached map for a description of the CALFED geographic scope)*

PROBLEM

What problem to beneficial uses has been identified by the scientific community (e.g., resource/regulatory agencies, universities, research programs or other) and associated with this parameter of concern? *(Please provide references where possible.)*

Parameter Characteristics	Yes	No
Demonstrated linkage to CALFED objectives, goals and solution principles? (See attachments)		
Causes a water quality problem within CALFED's geographic scope? (See attached map)		
Ameliorating the water quality problem caused by the parameter will benefit the Bay-Delta?		
The water quality problem caused by the parameter is generally recognized by the scientific community (e.g., resource and regulatory agencies, universities, research programs or others)?		
Chronic or acute toxicity in bioassays is attributable to the parameter based on toxicity tests (e.g., toxicity identification evaluations, etc.) ?		
Exceeds federal or state drinking water standards in treated water taken from the Delta?		
Causes raw water concentrations that require extremely expensive treatment that may or may not satisfy future drinking water standards?		
Impacts aesthetic qualities of drinking water?		
Endangers local wastewater reclamation and groundwater recharge programs?		
Economic impacts associated with the parameter are incurred by consumers?		
Causes characteristics of irrigation water that significantly influence sustainable agricultural production or O & M irrigation facilities and on-farm systems?		
Preponderance of data on the parameter shows concentrations exceed established criteria for the applicable medium (e.g., water, sediment, or tissue) ?		
Preponderance of data on the parameter shows the exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem ?		
Research/special studies show a preponderance of evidence of discernible impacts such as, but not limited to behavior, physiological or reproductive impacts associated with a parameter?		

SCIENTIFIC EVIDENCE

What data indicate exceedances of established criteria for applicable media (e.g., water, sediment or tissue)? *(Please provide references where possible.)*

Are data available indicating water quality exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem?

What research/special studies can you provide to the PAT that identify impacts associated with the parameter?

Are there any other supporting data that may be valuable in assessing this parameter of concern?

Request Form for Deleting a Parameter of Concern

Please complete form as thoroughly as possible and provide all applicable references and information.

Parameter of Concern:

Presenter:

Agency/Organization:

Address:

Phone/Fax/E-mail:

State the request to delete a parameter of concern:

GEOGRAPHIC SCOPE

Why is this parameter no longer a concern in CALFED's geographic scope? *(Please see attached map for a description of the CALFED geographic scope)*

PROBLEM

What problem to beneficial uses associated with this parameter of concern has been solved? *Please cite the source of information (e.g. resource/regulatory agencies, universities, research programs or other)*

Parameter Characteristics	Yes	No
Demonstrated linkage to CALFED objectives, goals and solution principles? (See attachments)		
Causes a water quality problem within CALFED's geographic scope? (See attached map)		
Ameliorating the water quality problem caused by the parameter will benefit the Bay-Delta?		
The water quality problem caused by the parameter is generally recognized by the scientific community (e.g., resource and regulatory agencies, universities, research programs or others)?		
Chronic or acute toxicity in bioassays is attributable to the parameter based on toxicity tests (e.g., toxicity identification evaluations, etc.) ?		
Exceeds federal or state drinking water standards in treated water taken from the Delta?		
Causes raw water concentrations that require extremely expensive treatment that may or may not satisfy future drinking water standards?		
Impacts aesthetic qualities of drinking water?		
Endangers local wastewater reclamation and groundwater recharge programs?		
Economic impacts associated with the parameter are incurred by consumers?		
Causes characteristics of irrigation water that significantly influence sustainable agricultural production or O & M irrigation facilities and on-farm systems?		
Preponderance of data on the parameter shows concentrations exceed established criteria for the applicable medium (e.g., water, sediment, or tissue) ?		
Preponderance of data on the parameter shows the exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem ?		
Research/special studies show a preponderance of evidence of discernible impacts such as, but not limited to behavior, physiological or reproductive impacts associated with a parameter?		

SCIENTIFIC EVIDENCE

What data indicate no exceedances of established criteria for applicable media (e.g., water, sediment or tissue) ? *(Please provide references where possible.)*

What data indicate that no water quality exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem ?

What research/special studies can you provide to the PAT that identify no impacts associated with the parameter of concern?

Are there any other supporting data that may be valuable in assessing the deletion of this parameter of concern?

Draft Guidelines For Adding A Parameter Of Concern

General

- Demonstrated linkage to CALFED objectives, goals and solution principles

Geographic Scope

- The parameter is causing a water quality problem within CALFED's geographical scope
- The geographic extent is the export and source areas affected by CALFED actions including Sacramento Basin, San Joaquin Basin, Tulare Lake Basin, Southern California, other export areas
- Ameliorating water quality problems will benefit the Bay-Delta

Problem

- A problem is generally recognized by the resource and regulatory agencies
- Toxicity identification evaluations (TIEs) indicate this parameter is toxic
- The characteristics of irrigation water that significantly influence sustainable agricultural production or O & M of irrigation facilities and on-farm systems
- Federal or state drinking water standards are exceeded in treated water taken from the Delta
- Raw water concentrations require extremely expensive treatment that may or may not satisfy future drinking water standards
- Aesthetic qualities of drinking water are impacted
- Local wastewater reclamation and groundwater recharge programs are endangered
- Economic impacts on consumers are incurred

Scientific Evidence

- Preponderance of data on the parameter shows:
 - concentrations exceed established criteria for the applicable medium (e.g., water, sediment, or tissue) and;
 - the exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem
- Research/special studies show a preponderance of evidence of discernible impacts such as, but not limited to behavioral, physiological or reproductive impacts associated with a parameter

Draft Guidelines For Deleting A Parameter Of Concern

General

- Deleting the parameter does not conflict with the CALFED objectives, goals and solution principles

Geographic Scope

- The parameter does not cause a water quality problem within CALFED's geographic scope
- The geographic extent is not within the export and source areas affected by CALFED actions including Sacramento Basin, San Joaquin Basin, Tulare Lake Basin, Southern California, other export areas

Problem

- The resource and regulatory agencies have not identified this parameter as the cause for problems to beneficial uses
- Toxicity identification evaluations (TIEs) do not indicate this parameter is toxic
- The parameter has not been identified as having a significant influence on sustainable agricultural production or O & M of irrigation facilities and on-farm systems
- Federal or state drinking water standards are not exceeded in treated water taken from the Delta
- Raw water concentrations do not require extremely expensive treatment that may or may not satisfy future drinking water standards
- No impact on aesthetic qualities of drinking water
- No endangerment to local wastewater reclamation and groundwater recharge programs
- Consumers are not incurring economic impacts due to the presence of this parameter

Scientific Evidence

- Data do not show that:
 - concentrations exceed established criteria for the applicable medium (e.g., water, sediment, or tissue) and;
 - the exceedances are of a frequency, duration or magnitude that may likely result in adverse impacts to biota inhabiting or using the Delta aquatic ecosystem
- No research/special studies exist that show a preponderance of evidence of discernible impacts such as, but not limited to behavioral, physiological or reproductive impacts associated with a parameter

Developing Targets

griculture, and Urban Subteams of the
city targets, tissue targets and sediment
was obtained from meeting minutes,

is for estuarine and freshwater sediment

administration sediment guidelines and USEPA

ontrol Plan objectives (including

ia, where available

ia are invalidated, refer to USEPA
water aquatic life protection

ed pesticide hazard assessment criteria

Contaminant Levels

th Advisories

plans (if adopted for California)

use to local water quality problems
is in San Francisco Bay).

or agriculture -- FAO Irrigation and
nization of the United Nations. Rome.

ty effects on crop yield in:

adbook of Plant Science in Agriculture.

re: Evaluation of existing data.
ng. 1976. Pp. 187-198.

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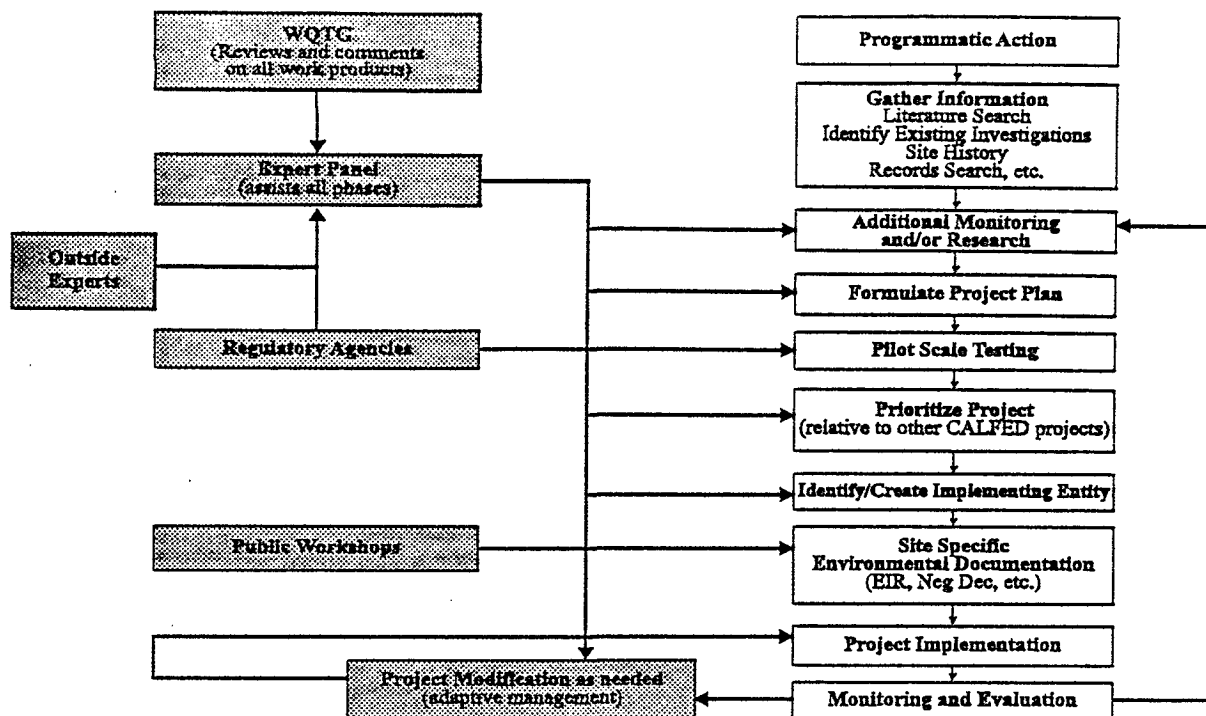


Figure 6. CALFED Water Quality Program Implementation Scheme.

Each action has differing implementation methods, performance targets (quantifiable reductions of parameters of concern), and indicators of success (attainment of water quality objectives). The actions will vary in cost, technical feasibility, and organizational responsibility for implementation and time schedule. Components of the actions will be subjected to pre-feasibility analysis and pilot scale evaluation to determine how best to implement programmatic actions.

MINE DRAINAGE

Two specific mine drainage actions are included in the WQPP. The first action is to reduce toxic effects of metals (principally, cadmium, copper, zinc) contained in waters of the Delta and Sacramento River regions. The principal method for reducing the metal inputs is by source control or treatment of

mine drainage at inactive or abandoned mine sites. Actions are targeted at sites on the Upper Sacramento River and its tributaries that are major contributors of metal loadings. Successful implementation will bring the concentration of the parameters into compliance with basin plan objectives. The second action is to reduce the toxic effects of mercury loadings to the Delta, Sacramento and San Joaquin River regions. Mercury levels would be reduced by employing source control and treatment of mine drainage at inactive and abandoned mine sites.

Both actions propose controlling the discharge of the metals from mine sites and/or treating mine drainage waters to prevent metals from entering water bodies. The second action includes the development of applied research programs to better